EFFECT OF VISUALIZATION AND MUSIC THERAPY ON STRESS AND SPORTS PERFORMANCE OF NATIONAL LEVEL TABLE TENNIS PLAYERS

SHORT SYNOPSIS

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DECLARATION

I hereby declare that the short synopsis "Effect of Visualization and Music Therapy on Stress and Sports Performance of National Level Table Tennis players" being submitted in partial fulfillment of the requirement for the degree of Doctor of Philosophy in Interdisciplinary Studies at Lakshmibai National Institute of Physical Education, Guwahati 2021-2022.

It is a bonafide record of original work carried out under the supervision of Dr. Shailesh Kumar Singh and has not been submitted in full or part to any other university or institute for a degree or diploma. Further, it is certified that the short synopsis is plagiarism free and the proof has been submitted.

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ABSTRACT

This study aims to study the impact of two psychological interventions namely Visualisation and Music Therapy on performance and stress of National level male Table Tennis players.

The present study employs a pretest-posttest randomised group design. 30 participants will be divided into three equal groups (two experimental and one control group): visualisation training (Group-I), music therapy (Group-II), and control group (Group-III). The experimental groups undergo the psychological training for three days per week for a total of twelve weeks. The control group do not participate in any training. All the participants are tested before and after the experimental intervention period.

Performance will be assessed through the results of the groups in the league matches conducted amongst them pre and post the intervention training. The number of matches won and lost by each player in the groups will be recorded and then added to calculate the total number of matches won by each group. The players' stress levels will be assessed using a Blood Cortisol test as well as the Perceived Stress Scale-10, developed by Sheldon Cohen and Gail M Williamson in 1988.

A comparison of the players data before and after the training will help in identifying the applicability of the interventions on performance and stress.

This study will recognise the significance of psychological factors in sports. Interventions such as Visualisation and Music Therapy can play a crucial role not only in improving performance of players but also managing their stress levels.

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1 INTRODUCTION

Sport psychology is a subfield of psychology that investigates the mental factors that influence performance in sports, physical activity, and exercise with the goal of improving individual and team performance. It focusses on improving performance by controlling emotions, as well as reducing the psychological effects of injuries and poor performance (Reese et al, 2012).

Psychological interventions are actions used to influence people's behaviour. It is defined as any activity that alters one's behaviour, emotional state, or feelings in some way. There are numerous types of intervention tactics available, each addressing a distinct problem. These interventions not only improve people's well-being by addressing anxiety, stress, self-esteem, and motivation, but they also have a significant impact on players' on-court performance.

The study aims to determine the impact of two psychological interventions, namely visualization and music therapy, on sports performance and stress level of Guwahati's National level male Table Tennis players.

It is in recent years only that Table Tennis in India has received some amount of attention. The impact of Indian athletes' performances on the international stage, particularly the record of eight medals won at the 2018 Commonwealth Games, has been enormous. The introduction of UTT (Ultimate Table Tennis League), and greater government and Table Tennis Federation of India sponsorship have further aided the sport's growth in recent years. The game has evolved dramatically in recent years—it is now much faster, there are more rallies, and there are many more players with new and unique approaches and game styles. The equipment and balls have also undergone significant changes. In India, Table Tennis is slowly transitioning from a recreational sport to a big professional sport. It has also been noticed that many elite Indian players travel to foreign countries for practice. According to Sathiyan Gnanasekaran (2018), Indian TT player, who is ranked 44 in world Table Tennis ratings, by assembling a strong team that includes a skilled coach with solid expertise, fitness trainer, physiotherapist, mental conditioning coach, dietician, and a financial backing, it is certainly possible to reach the top even by training in India.

In recent years, the government has supported in the expansion of the sport. Table Tennis, unlike other popular sports in India, demands attention not only in terms of physical but also mental health. This study will contribute to an enhanced understanding of the worth of psychological interventions in sports. Such approaches can help players monitor their performance and improve considerably. This research will raise awareness within the Table Tennis community about the importance of psychology in the sport and allocate sufficient time to such measures.

2 LITERATURE REVIEW

In a **2019** study, **Aurelio Olmedilla, Isabel Moreno-Fernández, Veronica Gómez-Espejo, Francisco Javier Robles-Palazón, Isidro Verdú, and Enrique Ortega** used The Psychological Characteristics Questionnaire for Sports Performance (CPRD) to assess stress factors associated with sports competition. A cognitive-behavioral therapy program was conducted. Statistical differences between pre- and post-measures were determined using dependent sample t-tests. Post-test scores were higher than the pre-tests in the "Influence of the Evaluation of Performance" and "Mental Skills" factors, implying a significant improvement in stress management related to performance evaluation, as well as the use of psychological resources and techniques. Furthermore, post-test scores were higher in the "Stress Control" factor, though the difference was not statistically significant. The practical implications of this study's findings can assist youth football players in managing competition stress using a psychological training program.

Garry Kuan, Tony Morris, Yee Cheng Kueh, and Peter C. Terry (2018) investigated the effects of relaxing and stimulating music on dart-throwing performance, physiological arousal indicators, and competitive state anxiety in 63 beginner dart throwers. Three groups were formed: unfamiliar relaxing music (URM), unfamiliar arousing music (UAM), or no music (NM). 40 dart throws at a dartboard were used to compare performance before and after 12 imaging sessions spread over four weeks. During imagery sessions 1 and 12, galvanic skin response (GSR), peripheral temperature (PT), and heart rate (HR) were measured, and the Competitive State Anxiety Inventory-2 Revised (CSAI-2R) was given prior to the pre- and post-intervention performance tasks. URM had significantly higher dart-throwing gain scores than UAM and NM, while UAM and NM had no significant difference. URM showed lower GSR, PT, and HR than UAM or NM, indicating lower arousal. URM and UAM showed significant reductions in somatic anxiety, but NM did not. URM and NM significantly reduced cognitive anxiety, but not UAM. URM, but not UAM or NM, experienced significant increases in self-confidence. URM was associated with higher performance, lower physiological markers of arousal, and more positive CSAI-2R profiles compared to the other two conditions.

Styliani Kyriaki Georgakaki and Eirini Karakasidou (2017) investigated how motivated self-talk impacted competitive anxiety and self-compassion. Participants were 18 to 25 years old and had prior competitive swimming experience. The trial lasted five sessions. The baseline evaluation was conducted during the first session. Participants filled out three questionnaires that assessed self-talk (Zervas, Stavrou, & Psychountaki, 2007), competitive anxiety levels (Martens, 1977; Zervas & Kakkos, 1990), and self-compassion levels. (Mantzios, Wilson, & Giannou, 2013; Neff, 2003b). Following the baseline examination, people were randomly assigned to one of two groups: experimental (n = 23) or control (n = 21). The experimental group participated in a three-session training program on motivating self-talk, where they learnt about the concept and how to apply it. The final assessment was held in the fifth session, with the baseline assessment method repeated. The study found that after program, participants in the experimental group used more self-talk, had less competitive anxiety, and had more self-compassion, whereas the control group showed no change.

S John, S.K Verma, & G.L Khanna (2012) sought to determine the effect of Music Therapy on salivary cortisol (SC) in reducing pre-competition stress (PCS) and its impact on shooting performance (PS). The study

included 100 male shooters divided into two groups: experimental (50 received MT in addition to routine sports-specific training) and control (50 received only routine training). The trial lasted five weeks, with four weeks of intervention and one week of follow-up to assess the effect. SC and PS examined pre, post, and follow-up data on quantitative phenotypic markers of the HPA-Axis. Compared to the control group, the experimental group demonstrated significant results in SC and PS postintervention and follow-up. The experimental group had a lower PCS and a higher PS, but the control group showed no difference. According to the findings, relaxation techniques such as MT can reduce PCS and thus improve PS. The findings indicate that four weeks of MT affects the HPA-Axis by lowering the amount of SC, a valid physiological marker of PCS.

Daniel Stankovic, Aleksandar Rakovic, Aleksandar Joksimovic, Emilija Petkovic, and Dina Joksimovic (2011) investigated how mental imagery and visualisation can help improve sport climbing performance. Visualisation can help with preprogramming a redpoint ascent, preparing for an on-sight ascent, preparing for competition, and climbing while injured or exhausted. According to studies, using visualisation to harness the mind/body link can significantly improve climbers' skills. It may also help them become more focused and overcome or avoid training burnout.

Michael Sheard and Jim Golby (2006) investigated the effects of a seven-week psychological skill training (PST) program on competitive swimming performance and positive psychological development. A 45-minute weekly PST program was attended by thirty six national level swimmers (13 boys, 23 girls; average age 13.9 years). The intervention included goal setting, visualisation, relaxation, concentration, and stop thinking. Official meetings provided performance times. Participants completed seven interventions that evaluated performance quality and six positive psychological traits: mental toughness, hardiness, self-esteem, self-efficacy, dispositional optimism, and positive affectivity. It demonstrated that three different swimming strokes, each covering 200 meters, improved dramatically after participating in the PST program. Other eight events did not show any significant improvements. In addition, the intervention significantly improved individuals' positive psychological profiles.

M Lejeune, C Decker, and X Sanchez (1994) discovered that mental rehearsal improved counterattack forehand and backhand performance in table tennis. The combination of mental repetition with observational and physical tactics improved table tennis performance both qualitatively and quantitatively (N = 40). However, correlations indicate that mental training effects cannot be described solely in terms of visual imagery.

Ricardo Weigert Coelho, Wagner De Campos, Sergio Gregorio Da Silva, Fabio Heitor Alves Okazaki, and Birgit Keller (2007) used a quasi-experimental design with a pre- and posttest, as well as a control group, to investigate the effect of imagery intervention on the performance of two tennis motor skills. Tennis service shots and receiving skills were used to represent open and closed talents, respectively. 48 male tennis players

(M = 17.2) were divided into two groups: (1) technical practice only (control), and (2) imagery and technical practice (experimental). Covariance analysis revealed that the imagery intervention had a significant main effect on the closed skill (p =.002).

BJ Wright, PD O'Halloran, and A.A. Stukas (2016) investigated how six psychological performance enhancement techniques (PETs) improved self-efficacy (SE) and skill performance in various ways. They also investigated whether indirect experiences and verbal persuasion were viable sources of SE (Bandura, 1982), as well as whether the effects of the six PETs persisted after controlling for achievement motivation traits and self-esteem. Imagery, modelling, goal setting, motivation, and knowledge-of-results augmented feedback all improved performance in less time than an instructional self-statement. Auditory motivation produced the greatest improvement in SE. After controlling for age, gender, achievement motivation, and self-esteem, larger SE change scores were associated with higher performance difference scores across all tasks. Certain SE sources may have a greater influence on SE and performance gains than others. The findings support Bandura's social-cognitive theory's explanation for SE, as verbal persuasion increases SE but not vicarious experiences.

T Cevada, P.E Vasques, H Moraes, and A Deslandes (2014) collected studies comparing salivary cortisol levels at rest in high-performing athletes to physically active or sedentary nonathletes. The magnitude effect was calculated by searching the PubMed, ISI Web of Knowledge, SciELO, LILACS, and Scopus databases for studies on salivary cortisol in athletes. Although three studies discovered that female athletes had higher salivary cortisol levels than a control group, the data showed homogeneity among baseline groups or in resting settings, implying a lack of discriminative ability.

Chiu et al. (2016) investigated the PSS measurement inconsistency between athletes and non-athletes, as well as construct validity and reliability in sports settings. According to the findings, the two-factor PSS-10 model was reliable. PSS was found to have a positive correlation with athletic burnout and life stress, but a negative correlation with coping efficacy, indicating both discriminant and convergent validity. In addition, the PSS subscales' test-retest reliability was significant (r =.66 and r =.50). The two-factor PSS-10 has been identified as an appropriate measure for assessing perceived stress in both sports and non-sports environments.

Leon-Pizarro et al. (2007) found that 66 patients with gynaecologic and breast cancer who were taught relaxation and guided imagery had a significant reduction in anxiety, depression, and physiological discomfort. **Walker et al. (1999)** found that relaxation techniques combined with visualisation were more effective than relaxation alone in treating pain in cancer patients.

Carol Holden Lund (1988) wanted to see how an audiotape series called Relaxation with Guided Imagery (RGI) affected surgery patients' psycho-physiological stress response and wound healing. Following gallbladder removal, 24 patients were randomly assigned to RGI or control (calm time) settings, and their recovery was measured using three indices: state anxiety, urine cortisol levels, and wound inflammatory reactions. An analysis of variance for repeated measures revealed that the RGI group experienced significantly

less state anxiety, lower cortisol levels one day after surgery, and surgical wound erythema than the control group. As a result, the RGI recordings revealed stress-relieving effects that were strongly related to recovery.

Psychological interventions boost an athlete's performance while also assists in the control of stress and anxiety, according to the research presented here. In addition, the interventions used have aided in the maintenance of other attributes as mental toughness, hardiness, self-esteem, self- efficacy, dispositional optimism, and positive affectivity. However, a little mention ofapplying interventions such as Visualization or Music therapy in the context of Table Tennis players and seeingwhether significant gains in their performance and physiological condition were created. As a result, more research is needed to shed light on the effect of psychological interventions on Table Tennis players' performance as well as physiological state in Guwahati.

3 DESCRIPTION OF BROAD AREA

Psychological Interventions

Interventions are actions taken to assist individuals in making changes. It refers to any activity that affects behaviour, emotional state, or feelings. There are numerous intervention options available, each addressing a different type of issue. These interventions are not only intended to treat a condition, but also to foster positive feelings, attitudes, and behaviours. Even when no mental illness is present, such interventions can improve people's quality of lives.

Traditional psychotherapy, relaxation training, biofeedback, counselling, hypnosis, systematic desensitisation, cognitive therapy for irrational thinking, visualisation, goal setting, music therapy, and positive self-talk are some of the interventions or therapies used to promote positive mood, reduce depression, and foster self-management confidence (self-efficacy).

Visualization Therapy

Guided visualisation is a technique in which the therapist guides the subject through envisioning a soothing scenario, experience, or set of mental images. The goal of guided visualisation is to take advantage of the brain's pleasant response to visuals in order to better manage emotions and life issues. The therapist will invite the patient to lie down comfortably with their eyes closed, then give parameters and encourage the patient to createa vivid story. The subject is free to let the visualisation unfold in any way that suits him and his imagination. It can be stopped whenever the subject feels uncomfortable. The more comprehensive and realistic a vision is, the more the brain believes it is truly experiencing it rather than merely picturing it, and the more powerful the outcomes are.

Music therapy

Music therapy is a type of treatment that uses music's naturally uplifting aspects to assist people improve their

mental health and overall well-being. The mind, body, brain, and behaviour are all affected by music therapy. Music has the ability to divert the mind, slow the body's rhythms, and change our mood, all of which might affect our behaviour.

Music that is properly chosen to match the demands of activities and the characteristics of persons has been demonstrated to improve performance significantly (Priest et al., 2004).

Some of the factors and problems treated by this type of therapy include motor skill deficiencies, emotional development problems, impaired cognition, quality of life issues, and anxiety/stress relief (according to Natural Standard research).

Performance

The completion of a task using knowledge, skills, and talents is referred to as performance. Competence of the performer determines an effective performance - level of ability and understanding; how well a person, machine, or other object performs a task or activity.

Stress

Any change that creates physical, emotional, or psychological discomfort is referred to as stress. Hans Selye invented the term stress as we know it today in 1936, defining it as "the non-specific response of the body to any demand for change."

Short-term and long-term stress are both possible. Both can cause a wide range of symptoms, but chronic stress can harm the body over time and have long-term health consequences. There are numerous factors in life that might lead to stress. Work, finances, relationships, parenting, and day-to-day hassles are all common sources of stress. The fight-or-flight response, which is triggered by stress, is the body's reaction to a perceived threat or danger. Certain hormones, such as adrenaline and cortisol, are released during this reaction. This increases heart rate, slows digestion, shunts blood flow to key muscle groups, and alters other autonomic nerve activities, providing a burst of energy and strength to the body.

Stress has been identified as a critical factor in sports, affecting both performance and social functioning (Jones & Hardy, 1990). Increased anxiety and burnout have been linked to a lack of ability to manage stress in sports, as well as low self-esteem and performance difficulties.

Cortisol

Cortisol is commonly referred to as the stress hormone. Apart from controlling our body's stress response, it has many other critical effects and functions throughout our body.

The cortisol blood test determines the amount of cortisol present in the blood. It is a steroid hormone generated by the adrenal gland. A urine or saliva test can also determine cortisol levels.

4 OBJECTIVES OF THE STUDY

Statement of the Problem

The present study is an attempt to find out the effect of Visualization and Music Therapy on Stress and Sports Performance of National level Table Tennis players.

Research Objectives

1. To identify the outcome of Visualization technique on sports performance of Table Tennis players.
2. To ascertain whether Visualization technique helps manage stress of the players.
3. To identify the outcome of Music therapy on sports performance of Table Tennis players.
4. To study whether Music therapy influences the stress level of the players.
5. To determine the amount of change in performance and stress produced by the interventions (Visualization technique and Music therapy) on the experimental groups as compared to the control group.
6. To compare the effect of Visualization technique and Music therapy on sports performance of Table Tennis players.
7. To compare the effect of Visualization technique and Music therapy on managing stress of the players.

Hypotheses

Research Hypotheses:

$\boldsymbol{H_1}$: There is a significant difference in the sports performance of the Table Tennis players after undergoing Visualization training.

$\boldsymbol{H_2}$: There is a significant difference in the stress level of the Table Tennis players post Visualization training.

$\boldsymbol{H_3}$**:** There is a significant difference in the sports performance of the Table Tennis players post Music therapy.

$\boldsymbol{H_4}$: There is a significant difference in the stress level of the Table Tennis players after undergoing Music therapy.

$\boldsymbol{H_5}$: There is a significant difference in the sports performance of the players in the experimental groups (Group1- Visualization technique and Group2- Music therapy) as compared to the control group.

$\boldsymbol{H_6}$: There is a significant difference in the stress level of the players in the experimental groups (Group1- Visualization technique and Group2- Music therapy) as compared to the control group.

Null Hypothesis:

$\boldsymbol{H_0}$: There is no significant difference in stress and sports performance of the National level Table Tennis players post Visualization and Music Therapy.

Delimitations of the Study

1. 30 male Table Tennis players of Guwahati, Assam.
2. Each player has participated at the National level.
3. Selected players are within the age bracket of 19 – 25 years.
4. The variables to be studied are match performance and stress level of the players.
5. Instrumental Music is used for the music therapy session.
6. Blood cortisol sample is collected by the lab technician and reports are prepared thereafter.

Limitations of the Study

1. Certain elements such as medication, nutrition, daily routine, habits and other factors that could affect the study's outcome have been identified as a limitation.
2. The emotional state of the players while playing matches could affect their performance and thus considered a limitation of the study.

5 RESEARCH METHODOLOGY

Selection of Subjects

A total of 30 male National level Table Tennis players from Guwahati are randomly chosen for this study. Prior to participating in the study, all the participants are to give their consent. Players are within 19 – 25 years of age.

Selection of Variables

Match performance and stress level of the National level Table Tennis players are the variables to be investigated.

Criterion Measure

1. Performance of the players is measured based on the results of the matches conducted by the researcher.

Group 1 (Visualization training): 10 players

Group 2 (Music therapy): 10 players

Group 3 (Control): 10 players

All 10 players in one group play best of three matches against each of the other 10 players in another group. Number of matches won and lost by each player in the groups are recorded and later summed to get the total number of matches won by each group.

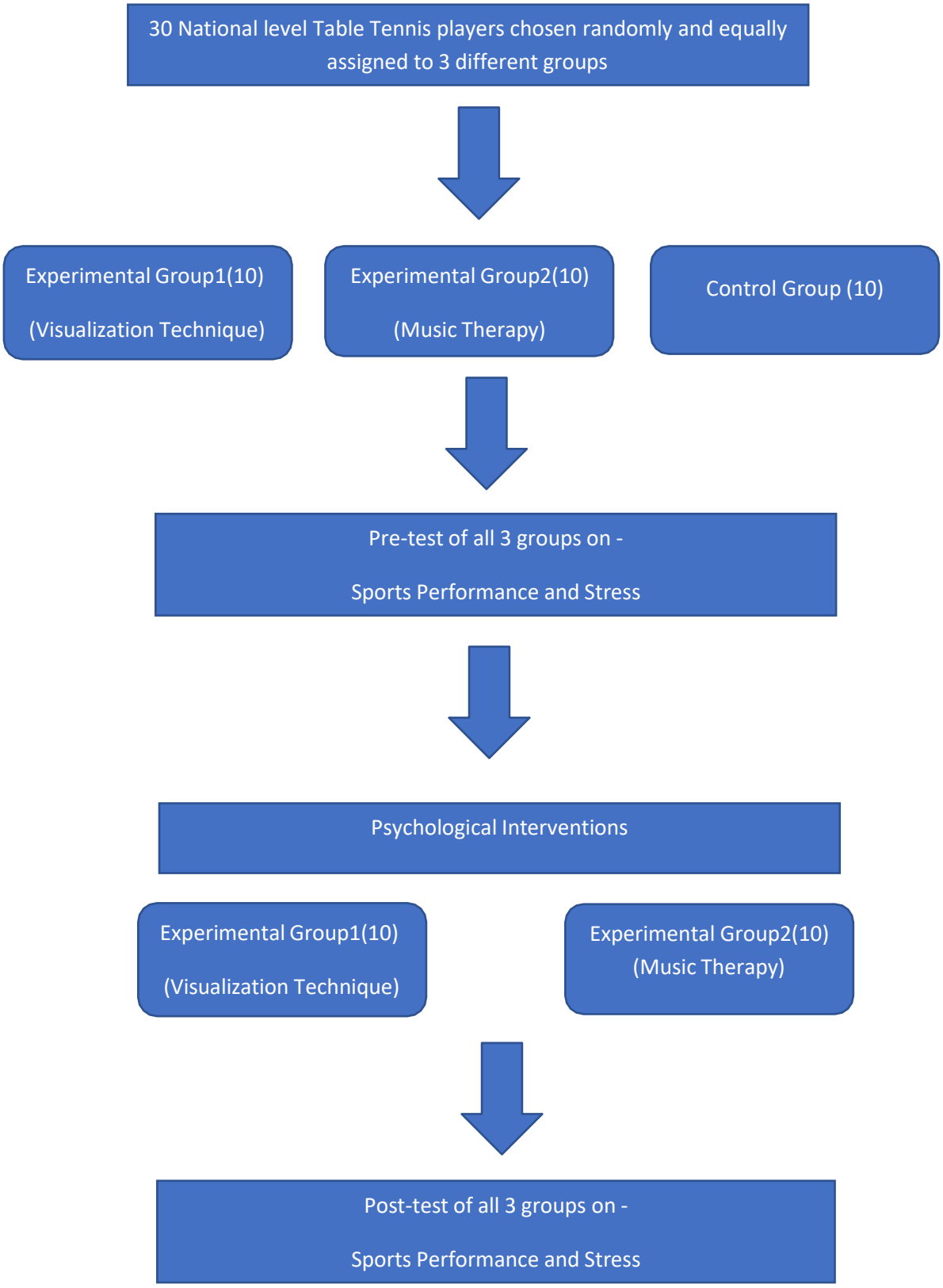
2. Stress level of the players is examined using the Blood Cortisol test and with the help of Perceived Stress Scale-10 developed by Sheldon Cohen and Gail M Williamson, 1988.

A *blood cortisol test* is done to measure the level of cortisol, a hormone in blood. The adrenal gland, which is placed on top of each kidney, produces cortisol. It helps the body regulate stress, among other things.

Perceived Stress Scale is a self-reported questionnaire that was created to assess how stressful certain situations in one's life are. The PSS-10 assesses how uncontrollable, unpredictable, and overloaded respondents' lives are. A number of direct questions about current levels of experienced stress are also included on the scale. Rather than focusing on specific events or experiences, the scored items are of a broad nature. Cronbach’s alpha for the PSS10 had a reliability score of 0.78.

Research Design

The present study is a Pretest Posttest Randomized group design. 30 participants are categorized within three equal groups (two experimental and one control group) namely, visualization training (Group-I), music therapy (Group- II) and control group (Group-III). The experimental groups undergo training for 3 days in a week for a total of 12 weeks. Control group did not go for any training. All the subjects were tested prior and after the experimental intervention period. Schematic representation of the research design: -



Training Program

Visualization Training Program

Visualization Training Program follows specific steps:

1. Relaxation
2. Visualization of Photo and Video
3. Imagery practice to modify errors and correction.

The goal of the **first phase** is to induce relaxation through deep breathing. The participants are asked to take off their shoes and sit in the chair. The first phase lasted anywhere from 3 to 5 minutes. Participants are told to sit comfortably in a chair with their eyes closed throughout this phase. Participants focuses on the up and down of the chest after taking a deep breath and notices that their breathing is calm and steady. With each inhalation, participants believe that they are pulling all tension from their bodies to lungs, and with each exhalation, they are releasing all tension and negative thoughts from their minds and bodies. With continued breathing, participants become more focused, confident, and ready for the Visual Imagery phase.

The **second phase** included a visual presentation of related skills using an LCD projector for 5 to 12 minutes. Photos and videos of other players, as well as self, are on exhibit. The researchers support the subjects in seeing where there are faults or improper motions, which let them comprehend how they may achieve mastery or perfection in their performance. Through successful visualization, athletes enter their imagination, see every detail, and experience exactly what it feels like to perform in the desired manner. During this phase following points are considered for effective visualization:

- Motivational videos of sports
- Technique and skill related videos/ photos with error and corrections
- Videos of elite players
- Videos of national and international matches
- Videos/ photos of their own practice sessions and matches

During the **third phase**, participants imagine what they had seen during the second phase and attempts to fix the faults using internal imagination thoughts and visual imagery. With their eyes closed, athletes attempt to produce a vivid and clear image. It is the image that the athletes have previously had or desired. When athletes imagine themselves practicing a particular ability in a sport, they experience a similar sequence of muscle firing as when they accomplish actual skills on the ground. After seeing the video, participants have a list of study topics that they want to employ throughout the game. If any athletes make a mistake while imagining, they should quickly reverse it and attempt again. Athletes should try to mimic thoughts, physical sensations, audience sound, colleagues' motivation, sights, and emotions that they would encounter during actual game conditions for an effective and correct imagination. Flow states, intrinsic motivation, sport confidence, and focus are all increased by forming a mental image from errors to perfect conduct.

The participants' feedback on how much relaxation and imagination they experienced during the Visualization Training is recorded. The participants are asked how much the intervention aided them in perceiving a balance between their skills and their challenges. They are questioned about how mental practice contributes to their enjoyment of their sport. They are also asked to provide feedback on how well mental imagery aided their concentration, confidence, and mastery of motor skills movements.

Music Therapy

Subjects lie down in a flat position with their eyes closed, arms at their sides with palms facing upwards, feet apart, and toes turned outwards in preparation for music therapy training. Specific audio music is gradually introduced over the course of 12 weeks of music therapy to focus on various bodily regions. The music is played to them through bluetooth speaker in a peaceful environment with no other players. Music therapy training is practiced as follows:

1. In a reclined position, listen to audio music.
2. Music listening promotes sentiments of warmth.
3. Produce calm and regular breathing feelings.
4. Promote strong and peaceful heartbeat.

Administration of the test

All the subjects are to be assembled at the training hall and a briefing about the training program is given. The researcher provides all necessary instructions to the players and requests them for their cooperation. It will be clearly explained to the subject that their responses and results will be kept private and will be used only for the research. The training program will be personally supervised by the research scholar throughout the duration of the training.

The details of the training program are as follows:

- Total duration of the training program is 12 weeks.
- 3 days a week training session for both the groups.
- Each session of training is of 45 minutes every evening.

Collection of data

The data will be collected from the National level male Table Tennis players from Guwahati on selected variables such as performance and stress. The data will be taken before the experimental intervention begins (pre-test) and after the 12 weeks training period (Music therapy and Visualization therapy) is completed (post-test). Performance record will be retrieved from the results of the matches conducted by the researcher. Stress

level recorded through the Cortisol test and a questionnaire, before and after the training sessions.

Statistical Technique to be used

After running a normality and homogeneity check of the data collected, appropriate statistical measure will be used. Considering the data is normal in nature, parametric test such as ANCOVA test can be used. For non-normal data tests like Quade's ANCOVA will be used.

6 EXPECTED OUTCOME OF THE RESEARCH

There have been numerous studies conducted to determine the best strategies for enhancing an athlete's performance. Physical strength, skill development, training, moral and emotional support, and mental strength have all received attention. This study however is driven by a desire to improve Table Tennis players performance by paying close attention toboth psychological as well as physiological aspects since psychological and physiological adaptation together equals to performance.

The research will be useful in the following ways:

1. Knowing the current performance of the Table Tennis players.
2. Educating the Table Tennis players and coaches in general about the outcome of Visualization and Music therapy on performance.
3. Understanding the use of psychological interventions to enhance performance and also to regulate stress.
4. Identifying the need of stress management in order to improve performance.
5. Recognizing the importance of the psychological element in sports.
6. Understanding the need to pay equal attention to both physical and psychological condition of players.
7. Developing appropriate training programs for the players to achieve excellence.

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